

Attorney's Docket No. 5051-338CT

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re: Conkling et al.

Serial No.: 09/963,340

Filed: September 24, 2001

For: REGULATION OF QUINOLATE PHOSPHORIBOSYL TRANSFERASE EXPRESSION

Group Art Unit: 1639

Confirmation No.: 1188

Examiner: Kallis

October 8, 2004

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

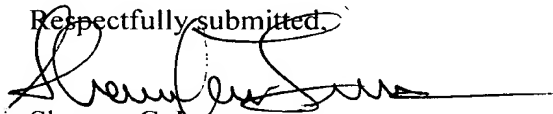
**SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT  
FOR INTERNATIONAL SEARCH REPORT**

Sir:

Attached is a Supplemental Form PTO-1449 listing documents cited in the European Search Reports for the corresponding European Application Numbers 04004192.3 and 04004191.5. Each document listed on the attached PTO-1449 was first cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Statement. A copy of any listed foreign patent document and/or non-patent literature including the Search Report, is enclosed. A copy of any listed U.S. patent and/or U.S. patent application publication is not provided herewith in accordance with the waiver by the U.S. Patent and Trademark Office of requirements under 37 C.F.R. § 1.98(a)(2)(i) for all U.S. national patent applications filed after June 30, 2003 and for all international applications that have entered the national stage under 35 USC § 371 after June 30, 2003.

No fee is believed due; however, the Commissioner is hereby authorized to charge any deficiency or credit any refund to Deposit Account No. 50-0220.

Respectfully submitted,

  
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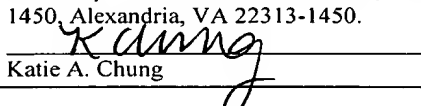
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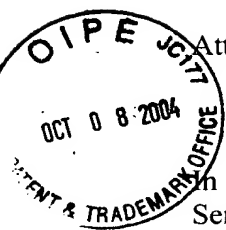
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Katie A. Chung





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Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313

**RESUBMISSION OF INFORMATION DISCLOSURE STATEMENT**

Dear Sir:

This Resubmission of Information Disclosure Statement is being made in response to the Official Action mailed April 8, 2004. Attached hereto is a copy of the Form PTO-1449 submitted on September 24, 2001 and copies of the non-U.S. patent references cited thereon. It is requested that these documents be considered by the Examiner and officially made of record in accordance with the provisions of 37 C.F.R. § 1.56 and Section 609 of the MPEP.

No fee is believed due. However, the Commissioner is hereby authorized to charge any deficiency or credit any overpayment to Deposit Account No. 50-0220.

Respectfully submitted,

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Katie A. Chung

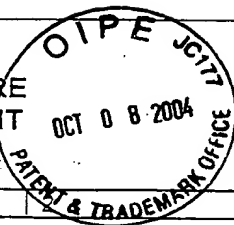
**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

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Sheet

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of



Complete if Known	
Application Number	To Be Assigned
Filing Date	September 21, 2001
First Named Inventor	Mark A. Conkling
Group Art Unit	
Examiner Name	
Attorney Docket Number	5051.338CT

**U.S. PATENT DOCUMENTS**

Examiner Initials*	Cite No.	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code (if known)			
	1	5,107,065		Shewmaker et al.	4/21/92	
	2	5,254,800		Bird et al.	10/19/93	
	3	5,260,205		Nakatani et al.	11/9/93	
	4	5,356,799		Fabijanski et al.	10/18/94	
	5	5,365,015		Grierson et al.	11/15/94	
	6	5,369,023		Nakatani et al.	11/29/94	
	7	5,451,514		Boudet et al.	9/19/95	
	8	5,453,566		Shewmaker et al.	9/26/95	
	9	5,610,288		Rubenstein	3/11/97	
	10	5,684,241		Nakatani et al.	11/4/97	

**FOREIGN PATENT DOCUMENTS**

Examiner Initials*	Cite No.	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T
		Office	Number	Kind Code (if known)				
	11		WO 00/67558		PCT			
	12		WO 93/0546		PCT			
	13		WO 94/28142		PCT			

**OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T
	14	Burtin, D., et al., <i>Over expression of Arginine Decarboxylase in Transgenic Plants</i> , <u>Biochem. J.</u> , Vol. 325 (Part 2), pp. 331-337 (1997).	
	15	Bush, et al., <i>Nicotine Biosynthetic Enzymes of Burley Tobacco</i> , <u>Tobacco Abstracts</u> , Vol. 24, pg. 260 (1980)	
	16	Bush, et al., <i>Physiological Aspects of Genetic Variation in Nicotine Content in Tobacco (Nicotiana tabacum)</i> , <u>Tobacco Abstract</u> , Vol. 23, pg. 30 (1979).	
	17	Conkling, et al., <i>Isolation of transcriptionally regulated root-specific genes from tobacco</i> , <u>Plant Physiology</u> , Vol. 93, No. 3, pp. 1203-1211 (1990)	
	18	Copy of International Search Report - date of mailing 22/10/98	
	19	Cornelissen, et al., <i>Both RNA Level and Translation Efficiency are Reduced by Anti-Sense RNA in Transgenic Tobacco</i> , <u>Nucleic Acids Res.</u> , Vol. 17, No. 3, pp. 833-843 (1989).	
	20	Crowley, et al., <u>Cell</u> , Vol. 43, pp. 633-641 (1985)	
	21	Cuozzo, et al., <i>Viral Protection in Transgenic Tobacco Plants Expressing the Cucumber Mosaic Virus Coat Protein Or Its Antisense RNA</i> , <u>Biotechnology</u> , Vol. 6, pp. 549-557 (1988)	
	22	Delauney, et al., <i>A Stable Bifunctional Antisense Transcript Inhibiting Gene Expression in Transgenic Plants</i> , <u>Proc. Natl. Acad. Sci. USA</u> , Vol. 85, pp. 4300-4304 (1988)	
	23	Ecker, et al., <i>Inhibition of Gene Expression in Plant Cells by Expression of Antisense RNA</i> , <u>Proc. Natl. Acad. Sci. USA</u> , Vol. 83, pp. 5372-5376 (1986)	
	24	Feth, et al., <i>Regulation in Tobacco Callus or Enzyme Activities of the Nicotine Pathway</i> , <u>Planta</u> , Vol. 168, pp. 402-407	
	25	Hamill, et al., <i>Over-expressing a yeast ornithine decarboxylase gene in transgenic roots of Nicotiana rustica can lead to enhanced nicotine accumulation</i> , <u>Plant Molecular Biology</u> , Vol. 15, pp. 27-38 (1990)	
	26	Hemenway, et al., <i>Analysis of the Mechanism of Protection in Transgenic Plants Expressing the Potato Virus x Coat Protein or Its Antisense RNA</i> , <u>EMBO J.</u> , Vol. 7, pp. 1273-1280	
	27	Hibi, et al., <i>Gene Expression in Tobacco Low-Nicotine Mutants</i> , <u>Plant Cell</u> , Vol. 6, pp. 723-735 (1994)	
	28	Holmberg, et al., <i>Transgenic tobacco expressing Vitreoscilla hemoglobin exhibits enhanced growth and altered metabolite production</i> , <u>Nature Biotechnology</u> , Vol. 15, pp. 244-247 (1997)	
	29	Hughes, Kelly T., et al., <i>The Salmonella typhimurium nadC Gene: Sequence Determination by Use of Mud-P22 and Purification of Quinolinate Phosphoribosyltransferase</i> , <u>Journal of Bacteriology</u> , Vol. 175, No. 2, pp. 479-486 (Jan. 1993)	
	30	Izant, et al., <i>Constitutive and conditional Suppression of Exogenous and Endogenous Genes by Anti-Sense RNA</i> , <u>Science</u> , Vol. 229, pp. 345-352 (1985)	

Examiner Signature

Date Considered

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

# INFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Sheet 2 of 2

Complete if Known

Application Number To Be Assigned  
 Filing Date September 21, 2001  
 First Named Inventor Mark A. Conkling  
 Group Art Unit  
 Examiner Name  
 Attorney Docket Number 5051.338CT

Examiner Initials*	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T
	31	Izant, et al., <i>Inhibition of Thymidine Kinase Gene Expression by Anti-Sense RNA: A Molecular Approach to Genetic Analysis</i> , Cell, Vol. 36, pp. 1007-1015 (April 1984)	
	32	Kim, et al., <i>Stable Reduction of Thymidine Kinase Activity in Cells Expressing High Levels of Anti-Sense RNA</i> , Cell, Vol. 42, pp. 129-138 (August 1985)	
	33	Lam, et al., <i>Site-Specific Mutations Alter In Vitro Factor Binding and Change Promoter Expression Pattern in Transgenic Plants</i> , Proc. Nat. Acad. Sci. USA, Vol. 86, pp. 7890-7894 (1989)	
	34	Lichtenstein, <i>Anti-sense RNA As A Tool To Study Plant Gene Expression</i> , Nature, Vol. 333, pp. 801-802 (1988)	
	35	McGarry, et al., Proc. Natl. Acad. Sci. USA (1986)	
	36	Melton, <i>Injected Anti-Sense RNAs Specifically Block Messenger RNA Translation In Vivo</i> , Proc. Natl. Acad. Sci. USA, Vol. 82, pp. 144-148 (1985)	
	37	Mizuno, et al., <i>A Unique Mechanism Regulating Gene Expression: Translational Inhibition By a Complementary RNA Transcript (micRNA)</i> , Trends in Genetics, Vol. 1, pp. 22-25 (1985)	
	38	Ohta, et al., <i>Metabolic Key Step Discriminating Nicotine Producing Tobacco Callus Strain From Ineffective One</i> , Biochem. Physiol. Pflanzen, Vol. 175, pp. 382-385 (1980)	
	39	Pestka, et al., <i>Anti-mRNA: Specific Inhibition of Translation of Single mRNA Molecules</i> , Proc. Natl. Acad. Sci. USA, Vol. 81, pp. 7525-7528 (1984)	
	40	Poulsen, et al., <i>Dissection of 5' Upstream Sequences for Selective Expression of the Nicotiana Plumbaginifolia rbcS-8B gene</i> , Mol. Gen. Genet., Vol. 214, pp. 16-23 (1988)	
	41	Preiss, et al., <i>Molecular genetics of Krüppel, A Gene Required for Segmentation of the Drosophila Embryo</i> , Plant Molecular Biology, Vol. 11, pp. 463-471 (1988)	
	42	Rezaian, et al., <i>Anti-Sense RNAs of Cucumber Mosaic Virus in Transgenic Plants Assessed For Control of the Virus</i> , Plant Molecular Biology, Vol. 11, pp. 463-471 (1988)	
	43	Rodermel, et al., <i>Nuclear-Organelle Interactions: Nuclear Antisense Gene Inhibits Ribulose Biphosphate Carboxylase Enzyme Levels In Transformed Tobacco Plants</i> , Cell, Vol. 55, pp. 673-681 (1988)	
	44	Rosenberg, et al., <i>Production of Phenocopies by Krüppel Antisense RNA Injection Into Drosophila Embryos</i> , Nature, Vol. 313, pp. 703-706 (1985)	
	45	Rothstein, et al., <i>Stable and Heritable Inhibition of the Expression of Nopaline Synthase in Tobacco Expressing Antisense RNA</i> , Proc. Natl. Sci. USA, Vol. 84, pp. 8439-8443 (1987)	
	46	Sandler, et al., <i>Inhibition of Gene Expression in Transformed Plants by Antisense RNA</i> , Plant Molecular Biology, Vol. 11, pp. 301-310 (1988)	
	47	Saunders, et al., <i>Comparison of Nicotine Biosynthetic Enzymes in Nicotine Level Genotypes of Burley Tobacco</i> , Agronomy Abstracts, pg. 84 (1978)	
	48	Saunders, et al., <i>Enzyme Activities in Nicotine Biosynthesis in Nicotiana Tabacum</i> , Journal of National Products, Vol. 41, pg. 646	
	49	Sheehy, et al., <i>Reduction of Polygalacturonase Activity in Tomato Fruit by Antisense RNA</i> , Proc. Natl. Acad. Sci. USA, Vol. 85, pp. 8805-8809 (1988)	
	50	Smith, et al., <i>Antisense RNA Inhibition of Polygalacturonase Gene Expression in Transgenic Tomatoes</i> , Nature, Vol. 334, pp. 724-726 (1988)	
	51	Song, Wen, <i>Molecular characterizations of two tobacco root-specific genes: TobRB7 and NtQPT1(1997)</i> ; UMI, Order No. DA9804246 from: Diss. Abstr. Int., B, Vol. 58, No. 8, pg. 4061; 224 pp. available; XP002080228	
	52	Travers, <i>Regulation by Anti-Sense RNA</i> , Nature, Vol. 310, pg. 410 (1984)	
	53	Van der Krol, et al., <i>An Anti-Sense Chalcone Synthase Gene in Transgenic Plants Inhibits Flower Pigmentation</i> , Nature, Vol. 333, pp. 866-869 (1988)	
	54	Van der Krol, et al., <i>Antisense Genes in Plants; An Overview</i> , Gene, Vol. 72, pp. 45-50 (1988)	
	55	Van der Krol, et al., <i>Modulation of Eukaryotic Gene Expression by Complementary RNA or DNA Sequences</i> , Biotechniques, Vol. 6, pp. 958-976 (1988)	
	56	Wagner, et al., <i>Regulation in Tobacco Callus of Enzyme Activities of the Nicotine Pathway</i> , Planta, Vol. 168, pp. 408-412.	
	57	Wagner, et al., <i>The Regulation of Enzyme Activities of the Nicotine Pathway in Tobacco</i> , Physiol. Plantarum, Vol. 68, pp. 667-672 (1986)	
	58	Wagner, Roland, et al., <i>Determination of Quinolinic Acid Phosphoribosyl-Transferase in Tobacco</i> , Phytochemistry, Vol. 23, No. 9, pp. 1881-1883 (1984)	
	59	Weintraub, et al., <i>Anti-sense RNA as a Molecular Tool for Genetic Analysis</i> , Trends in Genetics, Vol. 1, pp. 22-25 (1985)	
	60	West, et al., <i>Duplex-Duplex Interactions Catalyzed by RecA Protein Allow Strand Exchanges to Pass Double-Strand Breaks in DNA</i> , Cell, pp. 683-691 (1984)	

Examiner Signature

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